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LEFOTHENIEG THE PERIOD OF SERVICE OF SUVINT MACHINE TOOLS

The Soviet Union has a tremendous park of new, highly perfected machinery. By the end of 1950, industry's basic production equipment supply had increased. 58 percent over 1940. The machine-tool park more than doubled in the same period owing to the addition of new, more productive machine tools. In 1951, machine builders produced more than 400 new types of machines and mechanisms.

Leading production workers are seeking and finding new possibilities for increasing the cutput of each machine, for lengthening the operating period of equipment, and for putting into operation all available machines and machine

The most important source for better utilization of equipment lies in the reduction of unproductive losses in working time. Unnecessary idleness of equipment in repair plays a large part in such losses. Stakhanovite workers reduce this idle time by proper operation and painstaking care of machines and machanizzs. The result is that repairs are rarely needed; when they are necessary, the volume of repairs is reduced and the work is speeded.

Expanditures for equipment repair are provided for in the plan for each enterprise. There are three types of repair: current, medium, and capital. The interval between two consecutive repair jobs is called the interrepair period; the interval between two capital repair jobs is called the repair cycle. Approximately six current repair jobs and one or two medium repair jobs are carried out in the period of the repair cycle.

Consider, for example, the repair of metal-cutting equipment. According to existing norms, the average interrepair period for this equipment is set at from 6 to 9 months (when it is operated two work shifts per day), while the average repair cycle is from 4 to 6 years. Stakhanovite practice has shown that real possibilities exist for substantially lengthening the period of service of equipment without repairs.

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The first condition necessary to accomplish this is an increase in the workers' responsibility for the care of equipment -- an integral part of advanced production technique. The movement for socialist maintenance of equipment by the workers is being widely propagated throughout the country.

What are the economic results of lengthening the period of service of equipment?

First, expenditures for requir are reduced. It has been estimated that in lengthening the repair cycle to 8 or 12 years, the cost of repairing one machine tool (excluding servicing and checkups) is reduced an average of \$25 or \$50 rubles per year, respectively. Experience of production leaders and scientific research data show that it is entirely possible to lengthen the remain cycle of machine tools to 12 or more years. Lengthening of the interrepair period and the repair cycle is achieved, first of all, by improvement in the case of equipment and by timely preventive maintenance. Experience has also shown that the conversion of machine tools to high-speed methods does not brevent the extension of their period of service. It only requires still greater care of the machine tool.

Secondly, idle time of equipment is reduced. In lengthening the repair cycle to 8 and 12 years, the total idle time for each 1,000 machine tools is decreased by 1,400 and 2,800 machine-tool days per year, respectively. This is equivalent to putting from five to ten additional machine tools in operation, resulting in additional output of industrial production. The more additional production from the same park of machine tools and the same production area, the more the cost of that production is reduced. For each item produced, there is less expenditure for light, heat, building repair, salaries for administrative and technical personnel, etc.

In the third place, the number of repair vorkers and the number of machine tools engaged in repair of equipment are reduced. At present, an average of 73 workers and 25 machine tools are needed for the repair of every 1,000 machine tools. If the repair cycle is lengthened from 6 to 12 years, the repair staff and the number of machine tools used for repairs are cut in half.

In the fourth place, an important saving in materials, instruments, tools, electric power, etc., is effected. The minimum annual saving, in repair materials alone, due to reduction in the number of repairs, averages 100 rubles per machine tool. Approximately 100 kilowatt-hours of electric power are saved annually per machine tool.

The reduction in the idle time of equipment also means a reduction in the idlamss of workers. Because of this, the labor productivity of machine-tool operators is increasing.

Lengthening the period of service of equipment between repair jobs should, in all cases, be accompanied by an improvement in its condition in a qualitative sense. This is an index of the proper maintenance of machines and mechanisms, an index of the increase in the skill of the workers and their mastery of techniques.

In many cases, good maintenance of equipment makes it possible to do less labor-consuming repair work in the time allotted than called for by the plan.

The transfer of equipment to a worker for socialist maintenance is a great and responsible job. He should by no means be reduced simply to drawing up and signing a document of transfer. This valuable innovation has not been disseminated, nor has it achieved the results it should at the Vincimir Tractor Plant, at the Mosshtamp Plant, and several other enterprises, where it was confined to this type of formality.

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Before the transfer of equipment to socialist maintenance is put in effect, it is first necessary to assist the worker in studying it, in mastering the advanced methods of operation and care of equipment, and in examining the actual expenditures for repair, as well as the possible savings from lengthening the interrepair period. The vital task of the plant and suop trade union committees is to chack up on the way in which the pleadess made in accepting a machine tool for socialist maintenance are being carried out and to bring the results of this checkup to the attention of all the workers.

Experience has shown that the best results are obtained where repairmen, as well as machine-tool operators, are calisted in the drive to lengthen the period of service of equipment. Repair workers, by observing socialist maintenance of the equipment which they are servicing, improve the quality of repairs and effect greater durability and longer life of parts, units, and machines as a whole. They transmit their knowledge to the machine-tool operators and machinists. This increases the skills of production workers. It also results in better care of equipment and, consequently, in lengthening the period of service without repair or reducing the volume of regairs.

The Stakkanovite methods used in lengthening the period of service of equipment are many and varied. One group of workers discovers the best methods of lubrication; another builds shields or baffle plates which protect the friction surface from falling chips or dust; and a third succeeds in completely eliminating vibration, etc. Unquestionably, the greatest benefit is achieved by the complex utilication of leading methods. The Sveydlovsk machine builders are good examples in this respect. They study and sum up the best methods of servicing machines and machine tools and introduce all these authods into production.

Production meetings, technical conferences, Stakhanovite Tuesdays, etc., should be more widely utilized to disseminate the advanced experience gained in laugthening the interrepeir period. The plant press, whose duty it is to disseminate all that is new and advanced, plays a great role in this work.

At a number of enterprises, group inspection of the condition of equipment is practiced. The entire plant, factory, or mine personnel, participating in these inspections, is involved in the drive to lengthen the period of service of equipment. This drive makes possible the utilization of great reserves for further improvement of the quantitative and qualitative indexes of the work of enterprises.

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